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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/736,790	12/14/2000	Tomas Nordstrom	S1022/8495	6611

7590 06/23/2005
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Wolf, Greenfield & Sacks, P.C.
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Boston, MA 02210-2211

EXAMINER

BAYARD, EMMANUEL

ART UNIT	PAPER NUMBER
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2638

DATE MAILED: 06/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/736,790

Applicant(s)

NORDSTROM ET AL.

Examiner

Emmanuel Bayard

Art Unit

2638

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 March 2005. *1*
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 and 29-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-3, 5-15, 17-27 and 29-34 is/are allowed.
- 6) ☒ Claim(s) 4 and 16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

This is in response to amendment filed on 3/16/05 in which claims 1-27 and 29-34 are pending. The applicant's amendments have been fully considered but they are moot based on the ground of rejection.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 4 and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. Claims 4 and 16 recite the limitation "the inverse of the transfer matrix" in lines 15 and 13, respectively. There is insufficient antecedent basis for this limitation in the claim.
4. Claims 4 and 16 recite the limitation "the upstream direction" in lines 16 and 14, respectively. There is insufficient antecedent basis for this limitation in the claim.
5. Claims 4 and 16 recite the limitation "the storing means" in lines 17 and 15, respectively. There is insufficient antecedent basis for this limitation in the claim.

Allowable Subject Matter

6. Claims 1-3, 5-15 and 17-27, 29-34 are allowed over the prior art of record.
7. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record fails to anticipate or render obvious the following recited features: crosstalk canceling circuit. said far-end crosstalk canceling circuit comprising a

Art Unit: 2638

pre compensation circuit multiplying a before transmission. a vector $S = (S_i)$. $i = 1$ to n .
by a pre-compensation matrix such that the matrix product $H*M$ is diagonal H being a
transfer matrix of a plurality of transmission channels defined by $R = H*S$. where $R =$
 (R_i) $s_i = 1$ to n_s is the vector of the digital transmission symbols R_i respectively
received by a modem as recited in all independent claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the
examiner should be directed to Emmanuel Bayard whose telephone number is 571 272
3016. The examiner can normally be reached on Monday-Friday (7:Am-4:30PM)
Alternate Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's
supervisor, Vanderpuye Kenneth can be reached on 571 272 3078. The fax phone
number for the organization where this application or proceeding is assigned is 703-
872-9306.

Information regarding the status of an application may be obtained from the
Patent Application Information Retrieval (PAIR) system. Status information for
published applications may be obtained from either Private PAIR or Public PAIR.
Status information for unpublished applications is available through Private PAIR only.
For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should
you have questions on access to the Private PAIR system, contact the Electronic
Business Center (EBC) at 866-217-9197 (toll-free).

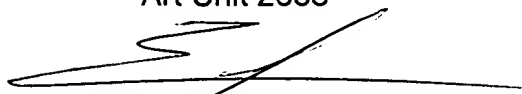
Emmanuel Bayard

Application/Control Number: 09/736,790
Art Unit: 2638

Page 4

6/17/05

Primary Examiner
Art Unit 2638



~~EMMANUEL BAYARD~~
~~PRIMARY EXAMINER~~